KENDRIYA VIDYALAYA SANGATHAN, LUCKNOW REGION
MONTHLY TEST PAPER (OCT-24)
CLASS XII
INFORMATICS PRACTICES (065)

Time allowed: 90 Minutes **Maximum Marks:40**

General Instructions:

- **Please check this question paper contains 19 questions.**
- **All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions**
- **The paper is divided into 5 Sections- A, B, C, D and E.**
- **Section A consists of 10 questions (1 to 10). Each question carries 1 Mark.**
- **Section B consists of 3 questions (11 to 13). Each question carries 2 Marks.**
- **Section C consists of 2 questions (14 to 15). Each question carries 3 Marks.**
- **Section D consists of 2 case study type questions (16 to 17). Each question carries 4 Marks.**
- **Section E consists of 2 questions (18 to 19). Each question carries 5 Marks.**
- **In case of MCQ, text of the correct answer should also be written.**

Q.N.	SECTION A	Marks
1	State whether the following statement is True or False: We can add a column with a NOT NULL constraint using ALTER TABLE only to a table that contains no row.	1
2	Which of the below given tasks cannot be performed though Data Manipulation Language (DML) commands? (A) Create table in Database (B) Insert a record into a table (C) Delete a record from a table (D) Modify a record in to a table	1
3	Identify the SQL command used to select only one copy of each set of duplicate values in a column from a table. (A) SELECT UNIQUE (B) SELECT DISTINCT (C) SELECT DIFFERENT (D) All of these.	1
4	Predict the output of the following query: SELECT ROUND(99.99,-2);	1

<table>
<tr><td></td><td>(A) 99.99 (B) 99.0
(C) 0 (D) 100</td><td></td></tr>
<tr><td>5</td><td>Fill in the blanks from the given options-
Series is _____ mutable but not _____ mutable.
(A) Data, size (B) Size, Data
(C) index, label (D) None of these</td><td>1</td></tr>
<tr><td>6</td><td>Which of the following command will show the last 2 rows from a Pandas Series named S1?
(A) S1.Tail(2)
(B) S1.tail( )
(C) S1.tails(2)
(D) None of the these</td><td>1</td></tr>
<tr><td>7</td><td>State whether the following statement is True or False:
In SQL, GROUP BY clause is used to arrange the column data in ascending or descending order.</td><td>1</td></tr>
<tr><td>8</td><td>Which of the following is not a correct option to create empty Series.
(A) pandas.Series({})
(B) pandas.Series([])
(C) pandas.Series( )
(D) None of these</td><td>1</td></tr>
<tr><td>9</td><td>Match the following SQL functions/clauses with their descriptions:
<table>
<tr><th colspan="2">SQL Function</th><th colspan="2">Description</th></tr>
<tr><td>P.</td><td>AVG()</td><td>1.</td><td>Returns the remainder when a number is divided by another number.</td></tr>
<tr><td>Q.</td><td>MOD()</td><td>2.</td><td>Returns the specified characters of a string from the left.</td></tr>
<tr><td>R.</td><td>MID()</td><td>3.</td><td>Returns the average value in a column</td></tr>
<tr><td>S.</td><td>LEFT()</td><td>4.</td><td>Extracts a portion of string.</td></tr>
</table>
(A) P-3, Q-4, R-3, S-1
(B) P-2, Q-4, R-1, S-3
(C) P-3, Q-1, R-4, S-2
(D)P-4, Q-2, R-1, S-3</td><td>1</td></tr>
</table>

10	Assertion (A): In MySQL, we can join more than two tables of a database. Reason (R): We can specify any type of condition using any comparison operator in an equi-join. (A) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A) (B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A) (C) Assertion (A) is True, but Reason (R) is False (D) Assertion (A) is False, but Reason (R) is True	1
	Section-B (3 x 2 = 06 Marks)	
11	Consider the string: "**Informatics Practices-2024**". Write suitable MySQL query for the following task. I. To retrieve the "**2024**" from the above given string. II. Display the position of "**form**" in the given string.	**2**
12	Given a Series object "**City"** having area in sq. km for different places. Write a statement to print the cities which are more than 5000 sq. km. Also write the pandas statement to display the last value of series.	**2**
13	Complete the given Python code to get the required output as - **Output:** Sri Lanka Colombo China Beijing India New Delhi **Code:** import _____ as pd capitals = [_____, "Beijing", "New Delhi"] country = ["Sri Lanka", "China", "India"] S1 = pd.Series(_____, country) print(_____)	**2**
	Section-C (2 x 3 = 06 Marks)	
14	<table><tr><td>UP</td><td>Lucknow</td></tr><tr><td>MP</td><td>Bhopal</td></tr><tr><td>HP</td><td>Shimla</td></tr></table> Write a Python Program to create a Series object **"Capitals"** as shown below using a dictionary. Note that the left column indicates the indices and the right column displays the data.	**3**

15 | **3**

I. Write an SQL statement to create a table named **PRODUCT**, with the following specifications:

Column Name	**Data Type**	**Key**
ProductID	Numeric	Primary Key
ProductName	Varchar(20)	Not Null
Manufacturer	Varchar(10)	
DateofManufacture	Date	
Price	Float(10,2)	

II. Write SQL Query to insert the following data in the PRODUCT table (1001, Face Wash, Lakme, 20123-08-18, 125.50)

Section-D (2 x 4 = 8 Marks)

16 | **2+2**

I. Nisha, a class teacher of class 12 want to count the house-wise student of her class, she has written the following query-
SELECT house, COUNT(*) FROM Student;
Identify and explain the problem with the above SQL query and provide the solution by writing correct query.

II. Observe the following table TRANSACTION and answer the questions that follows-

TNO	**TYPE**	**AMOUNT**	**CNO**
T1	CREDIT	12000	C2
T2	DEBIT	5000	C1

(a) What is the degree and cardinality of the table TRANSACTION.
(b) Identify the Primary Key and Candidate Key may be made in the table TRANSACTION.

17 — **4**

Saurya, who works as Database Administrator in Sports Academy, has developed a database for Players. This database includes a table *SPORTS* whose column (attribute) names are mentioned below:

SCode: Sports Code

SportsName: Name of the Sport

NoofPlayers: Number of players in a sport

Coachname: Name of Coach

SPORTS

SCode	SportName	NoofPlayers	Coachname
S001	Cricket	21	Rahul Dravid
S002	Football	25	Roshan Lal
S003	Hockey	40	Sardar Singh
S004	Cricket	19	Chetan Sharma
S005	Archery	12	Limbaram

I. Write SQL query to display all Sports name in Uppercase.

II. Write SQL query to display the sports name along with highest number of players.

III. Write SQL query to display the number of characters in the name of Cricket Coach.

IV. Write SQL query to display the Sports Code and number of players in ascending order by number of players.

Section-E (3 x 5 = 15 Marks)

18 — **2+3**

I. Given the following Series S1 and S2:

S2	
A	80
B	20
D	50

(a) Write the command to print the sum of S1 and S2

(b) Write the output for command

print(S1-S2)

II. Consider the Series object **Collection,** the charity contribution made by each section of class 12th students-

Collection=pd.Series([6700,5600,5000,5200], index=['A', 'B', 'C', 'D'])

Write output for the following python pandas statement -

	(a) print(Collection>5500) (b) print(Collection[2:3]) (c) print(Collection[‘B’: ‘C’])	
19	Write suitable SQL query for the following: I. To display the minimum score from the **marks** column (attribute) in the Tests table. II. To display the First two characters of the Student_Name (attribute) in the Student Table. III. To display the day name from the column DOB in the Employee table. IV. To display the total salary from the salary column (attribute) of the Employee table. V. To determine the count of not null values in the Address column (attribute) in Suppliers table. **OR** Write suitable SQL query for the following: I. Round the value 475.2554 up to 2 decimal places. II. Calculate the remainder when 123 is divided by 7. III. Display the number of characters in the string 'Happy Tests'. **IV.** Display the four characters starting from third onward from the string 'CBSE@2024'. **V.** Display details from **'name'** column (attribute), in the **'Registration'** table, after removing any leading and trailing spaces.	**5**